

# Cotteridge friends meeting house



**In 2005 the Quaker community in Cotteridge decided it was time to do something about their draughty old meeting house. Their main hall was difficult to heat and their electricity bills were sky-high.**

Built in the 1960s, the meeting house had large plate glass windows, solid walls, poor roof insulation and was heated with inefficient electric night storage heaters. This made it difficult to keep warm and expensive to run. The Friends had had enough.

The surprise donation of a solar panel from one Friend to the warden's bungalow inspired the group to find out more about saving energy, and they set out to make their meeting house as energy efficient as possible.

A small number of Cotteridge Friends formed an environmental group to look at how they could save energy in the meeting house. Following an initial walk around audit of their building the group made some small changes, like fitting energy saving light bulbs and switching to a green energy tariff. However, in 2006, as electricity prices rose and two of their old storage heaters broke down, the group decided more action needed to be taken.

Since then, the group have transformed their once-



draughty meeting house into a cosy and environmentally-friendly community space. By reducing the amount of electricity they use they have cut both their bills and their carbon emissions.

### **Cotteridge Friends and the Energy Saving Trust**

The Energy Saving Trust has given Cotteridge Friends lots of useful advice on how to save energy.

Green Communities, the Energy Saving Trust's programme to support local projects trying to save energy, put Cotteridge Friends in touch with an energy saving expert in their local area. The Energy Saving Trust paid for the expert to carry out an in-depth energy audit of the meeting house and provide the group with recommendations on how they could save energy. This built on the actions the group had

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13 electric storage heaters replaced with 5 air source heat pumps

2

Cut electricity use by 65 per cent and carbon emissions by 13 tonnes a year

3

Fitted solar PV panels to generate their own power

already taken and helped them plan and focus their next steps.

### Cotteridge Friends' achievements

Cotteridge Friends have transformed their meeting house step by step, from using low energy light bulbs all the way up to generating their own electricity.

### Increasing insulation

The group learned early on that good insulation is one of the best ways to save energy. One of the first things the Friends did was replace their old plate glass windows with double-glazing. Although this was expensive – the building had many large windows – it was a good place to start. The reduction in heat loss and draughts made it a worthwhile investment.

Volunteers “dry-lined” the building’s solid walls by attaching a layer of plasterboard to them. This helped the rooms retain warmth. The group also fitted foam block insulation to the outside of their flat roof to cut down on heat loss. Reducing these heat losses saved on energy consumption and made the building more comfortable.

### Generating their own power

The Friends have replaced their 13 expensive electric storage heaters with 5 air source heat pumps and air distribution systems throughout the building. These are a good, energy efficient alternative – for every unit of electricity used they give out approximately three units of heat. It’s also easier to programme the time they come on at and their temperature, so heat is only on when it is needed.

### Energy saving and carbon cutting

The Friends have monitored the building’s electricity use,

taking daily meter readings since 2005 calculating how much electricity each change made has saved. In that time, they’ve cut the meeting house’s electricity use by a massive 65 per cent, and their carbon emissions by 13 tonnes a year, saving them thousands of pounds on their bills.

### Fundraising

Cotteridge Friends spent almost £135,000 on their energy saving work. They got this funding from various community grant schemes and trusts, including the Veolia Environmental Trust, the Government’s Low Carbon Buildings Programme and national and local Quaker bodies. They also raised a massive £30,500 just from their own members.

Here’s a breakdown of what the group spent the money on:

Measure	Approx. cost	Estimated CO <sub>2</sub> saved/year
Lighting	£1000	1 tonne
Double Glazing	£17,000	2 tonnes
Dry Lining	£9000	2 tonnes
Warm Roof Insulation	£23,000	2.5 tonnes
5 Air Source Heat Pumps	£33,000	3 tonnes
Solar Panels	£52,000	4.3 tonnes

Figures from April 2009. Carbon savings have been measured from daily meter readings, for each kWh used multiplied by 0.43 to give an estimate of CO<sub>2</sub> saved

### **Learning – and helping others**

The group have learnt so much about the importance of saving energy and how to change habits for the better. They are now using this knowledge to inspire and support other groups in their area.

### **Cotteridge Friends' challenges**

Cotteridge Friends have learned a huge amount since setting off on their energy saving journey.

One of the group's biggest challenges was to change their own behaviour and shake off their old habits. The group held an awareness raising meeting with quizzes to let members know about the big differences small individual changes can make. They still encourage each other to close the curtains in the evening, shut doors and switch lights off when rooms aren't being used. But old habits don't change overnight. The group had to continue to promote the energy saving message longer than they expected.

The Friends took daily meter readings of how much energy they were using and displayed the results on posters around the meeting house. They found this was a great way to remind people of the progress they were making and it inspired the group to keep going with the energy saving project. Celebrating small successes along the way also kept the group on track to achieve their aim of a warmer and more environmentally-friendly meeting house.

### **What has the Cotteridge Friends Meeting House done since?**

In June 2010, they fitted solar photovoltaic panels. By using this green technology to generate their own power, the

group has cut their electricity bills and carbon emissions even further.

Between 2004 and 2011 they reduced the actual energy footprint of their all electric meeting house by about 90 per cent from c. 52,000kWh to 5,610kWh.

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For more information email  
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